



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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February 12, 1999

TO: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist

Re: Response to Division Order 97A, Hiawatha Coal Company, Hiawatha Mine,  
ACT/007/011-DO97A, Folder #2, Carbon County, Utah

## SUMMARY:

In accordance with Division Order 97A, Hiawatha Coal Company has proposed changes to its mining and reclamation plan. Over about the past two years, the Division has received numerous submittals to satisfy the requirements of this division order. On December 4, 1998, the Division approved these changes so they could be incorporated in the mining and reclamation plan, but it recognized the responses still had deficiencies. On February 8, 1999, the Division received a response to the technical analysis sent December 4, 1998.

## TECHNICAL ANALYSIS:

## OPERATION PLAN

## INTERIM STABILIZATION

Regulatory Reference: R645-301-331

### Analysis:

Chapter 3 of the plan discusses interim revegetation plans for certain types of areas. A mix of intermediate wheatgrass and alfalfa would be used for long-term interim revegetation, and a winter grain, such as barley, would be used for short-term revegetation. The seeding rate for the winter grain has been increased to 80 pounds per acre. This is the rate recommended in the "Interagency Forage and Conservation Planting Guide for Utah."

### Findings:

Information provided in the proposal is considered adequate to meet the requirements of

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this section of the regulations.

## **RECLAMATION PLAN**

### **REVEGETATION**

Regulatory Reference: R645-301-341

#### **Analysis:**

The revegetation methods in the plan have been previously reviewed. The permittee may want to make some adjustments to the seed mixes depending on the results of 1996 and 1997 revegetation efforts.

A few areas near the refuse piles are within the disturbed area but are not disturbed in the sense that topsoil and vegetation have been removed. They have natural vegetation, but they have been heavily affected by wind-blown coal fines. The permittee has committed to mitigate this disturbance in two areas shown on Exhibit V-9C. In Chapter 5, Section R645-301-541 under the heading "Hiawatha Processing Plant and Waste Disposal Sites Reclamation," the permittee commits to vacuum or scrape the areas to remove fine coal particles then scarify and reseed them. While the plan does not specify which seed mixture would be used to seed the area, seed mix 2 is for use on refuse disposal areas and would be appropriate for these areas. Other aspects of this remediation plan are acceptable.

Other areas besides those shown on Exhibit V-9C have also been affected by coal fines, but, as far as the Division is aware, none of these either need to be or should be remediated. In some areas, there are very few fines. In other areas, although there may be quite a few fines, it appears there would be more damage than benefit from remediation.

To reduce compaction in the upper layers, refuse materials will be ripped about every five feet to a depth of 18-24 inches. In the past, the refuse has been ripped at much greater intervals.

Hydroseeding and broadcast seeding will be the preferred seeding methods, but drill seeding could also be used. If drill seeding is used, the Division will be contacted to determine if additional measures are needed during planting since some species require a shallow seeding depth.

With the Division and the Natural Resources Conservation Service (NRCS), the permittee has examined some of the existing reference areas and proposed different areas to be used as revegetation success standards. These and all other reference areas and the areas to

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which they will be compared are shown on Table III-9. A letter from the NRCS showing production and site conditions of the reference areas (except MCR2) is in Appendix III-3.

It was impossible to locate reference area SBR3, so a new reference area was marked in the field and evaluated by the NRCS. While this area is dominated by basin big sage, it does have grass and forb understory, and the NRCS rated the range condition as "good." Exhibits III-4 and III-5 previously showed this reference area in different locations, but this discrepancy has now been corrected.

The other new reference area is a riparian area in South Fork. The site condition was rated as "fair" which is adequate for using it as a revegetation success standard. This area will be used for comparison to areas near reclaimed stream channels at the King 4, 5, and 6 Mines. The location of this reference area is shown on Exhibit III-5.

Other reference areas had been previously established but were evaluated by the NRCS representative. SBR12 was in "fair" condition," and MBR1 and PJR4 were both in "good" condition. The only area not rated was the mixed conifer reference area in Middle Fork which still had snow on it at the time of the evaluation. This reference area was previously evaluated, and it is not anticipated the rating would change.

The reference areas all have vegetation typical of the area although portions of SBR3 have been previously disturbed. Since all of the reference areas are in fair or better condition, they are considered acceptable success standards. Reference area PJR5 has been deleted.

### **Findings:**

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

### **RECOMMENDATIONS:**

The portions of the response to the division order pertaining to biology are adequate and can be approved.